

REMARKS

Claims 20-33, 36-37, 39-41, and 44-67 are pending. Claims 1-19, 34-35, 38, and 42-43 were previously cancelled. Applicants note that the present Office action makes no reference to Claims 50, 57, and 64, and that these claims have not been cancelled or withdrawn and remain the in the present application.

35 U.S.C. § 103(a) Rejections

Claims 20-28, 30-33, 36, 37, 39-41, 44-49, 51-56, 58, 60-63, and 65-67 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 2,621,685 (“Butz”) in view of U.S. Patent No. 5,607,023 (“Palm”) and/or U.S. Patent No. 3,657,813 (“Knight”). In addition, Claims 20-33, 36, 37, 39-41, 44-49, 51-56, 58, 60-63, and 65-67 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Butz in view of U.S. Patent No. 6,183,368 (“King”) and/or U.S. Patent No. 5,564,981 (“Iwabuchi”). Reconsideration of the rejections is respectfully requested.

To establish a *prima facie* case of obviousness, three basic criteria must be met. *M.P.E.P.* §§ 706.02(j) and 2143.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be both found in the prior art, not in applicants' disclosure.

Independent Claim 20 and dependent Claims 21-33

Claim 20 defines a drive mechanism for a power tool, the power tool including a motor including a drive shaft and an output member adapted to support a tool element, the drive mechanism comprising a gear driven by the drive shaft for rotation about an axis, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear, the hub including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member, a drive arm connecting the drive member to the output member to convert rotation of the hub to reciprocation of the output member, the drive arm being pivotably connected to the drive member and being pivotably connected to the output

member, and structure positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub.

Butz does not teach or suggest a drive mechanism for a power tool including, among other things, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear, the hub including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member. Rather, the tool of Butz includes a shaft 36 having a flywheel 24 press fit onto a splined upper end and a miter gear 40 securely fixed to a lower end of the shaft 36 by a set-screw 39. A dowel pin 29 extends upwardly from an upper end of the flywheel 24.

As noted by the Examiner, Butz also does not teach or suggest a drive mechanism for a power tool including structure positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub. Rather, the tool of Butz includes a shaft 42 extending horizontally through a tool body or holder 9 and a miter gear 41 securely fixed to an end of the shaft 42 by a set-screw 43. The tool of Butz also includes a shaft 36 extending vertically through the holder 9 and a miter gear 40 securely fixed to an end of the shaft 36 by a set-screw 39. A flywheel 24 is press fit onto a splined upper end of the shaft 36. Rotational motion is transferred directly from the horizontal shaft 42 and the miter gear 41 to the miter gear 40 and the vertical shaft 36.

For these and other reasons, Butz does not teach or suggest the subject matter defined by Claim 20.

Palm does not cure the deficiencies of Butz. Palm does not teach or suggest a drive mechanism including, among other things, a hub including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member. Rather, the tool 9 of Palm includes a radial force device 510 supported in a gear 518 and a jack shaft 24 extending outwardly from a central axis of the radial drive force device 510. A wobble plate member 28 is supported on the jack shaft 24 forwardly and spaced apart from the drive force device 510 by radially inwardly extending portions of the gear 518.

Palm also does not teach or suggest a drive mechanism including a drive arm connecting the drive member to the output member to convert rotation of the hub to reciprocation of the output member, the drive arm being pivotably connected to the drive member and being

pivotably connected to the output member. Rather, a lower end of the drive arm 34 of Palm supports a bearing 32 and is secured to the wobble plate member 28. A number of elements, including the drive arm 35 of the secondary wobble plate and a bearing 32 secured to the drive arm 35, are positioned between the drive arm 34 and the drive force device 510 of Palm.

For these and other reasons, Palm does not teach or suggest the subject matter defined by Claim 20.

Knight does not cure the deficiencies of Butz and Palm. Knight does not teach or suggest structure positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub. Rather, the pruning saw 10 of Knight includes a slip clutch including a gear 116 having a smooth upper surface, a cam element 120 having a smooth lower surface, and a spring washer positioned below the gear 116 for providing an adjustable spring force between the smooth lower surface of the cam element 120 and the smooth upper surface of the gear 116.

In addition, Knight does not teach or suggest a power tool including a hub including a drive member offset from the axis and a drive arm connecting the drive member to the output member to convert rotation of the hub to reciprocation of the output member, the drive arm being pivotably connected to the drive member and being pivotably connected to the output member. Rather, the pruning saw 10 of Knight includes a pin 125, which extends upwardly from the cam element 120 and is engageable in a cross guide 126. As shown in Figs. 2-3 of Knight, the cross guide 126 is secured to an output element 127 for sliding movement with the output element 127 relative to the saw housing 14.

For these and other reasons, Knight does not teach or suggest the subject matter defined by Claim 20.

King does not cure the deficiencies of Butz, Palm, and Knight. King does not teach or suggest a drive mechanism for a power tool including, among other things, a motor including a drive shaft and an output member adapted to support a tool element. Rather, King discloses a “[f]lexible [coupling]... for transferring torque from output or drive shafts of devices such as an electric motor or internal combustion engine, to input shafts of various machines or devices, such as fans, packaging machines or pumps.” King, Column 1, lines 17-21.

King also does not teach or suggest a hub including a drive member offset from the axis and a drive arm connecting the drive member to the output member to convert rotation of the hub

to reciprocation of the output member, the drive arm being pivotably connected to the drive member and being pivotably connected to the output member. Rather, the coupling assembly 10 of King has a linear arrangement and includes circular coupling members 14, 16, a generally circular elastomeric spider 18 and a generally circular housing assembly 12 positioned between the first coupling member 14 and the spider 18 and the second coupling member 16.

For these and other reasons, King does not teach or suggest the subject matter defined by Claim 20.

Iwabuchi does not cure the deficiencies of Butz, Palm, Knight, and King. Iwabuchi does not teach or suggest a drive mechanism for a power tool including, among other things, a motor including a drive shaft and an output member adapted to support a tool element. Rather, Iwabuchi discloses a transmission buffer for “a motor [used] when a window of an automobile is raised or lowered by the turning force of the motor.” Iwabuchi, Column 1, lines 18-20.

Iwabuchi also does not teach or suggest a hub including a drive member offset from the axis and a drive arm connecting the drive member to the output member to convert rotation of the hub to reciprocation of the output member, the drive arm being pivotably connected to the drive member and being pivotably connected to the output member. Rather, the power window drive element of Iwabuchi has a linear arrangement and includes a generally circular input rotary body 6, a generally circular output rotary body 11 and a generally circular elastic body 10 positioned between the input rotary body 6 and the output rotary body 11.

For these and other reasons, Iwabuchi does not teach or suggest the subject matter defined by Claim 20.

In the present Office action, the Examiner argues that “[i]t would have been obvious to one of ordinary skill in the art to have modified Butz by providing his gear (40) with an elastically connected internal hub, as taught by Palm, in order to extend the life of the tool.” In the alternative, the Examiner argues that the invention of Claim 20 would have been obvious to one of ordinary skill in the art in view of a combination of Butz, Palm, and Knight and that such a combination would have been obvious to a person of ordinary skill in the art. The Examiner further argues that the invention of Claim 20 would have been obvious in view of a combination of Butz, Palm, Knight, and King and/or Iwabuchi. Applicants respectfully disagree.

Again, to establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (CCPA 1974); MPEP §§706.02(j), 2143.03.

In establishing a *prima facie* case of obviousness, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellant's disclosure. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 U.S.P.Q.2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); In re Vaeck, 947 F.2d at 493, 20 U.S.P.Q.2d at 1442; MPEP §2143. Deficiencies of references cannot be saved by appeals to "common sense" and "basic knowledge" without any evidentiary support. In re Zurko, 258 F.3d 1379, 1385, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001).

In addition, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. In re Gordon, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984); In re Mills, 916 F.2d 680, 682, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990); MPEP §2143.01. "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." Ex parte Chicago Rawhide Mfg. Co., 223 U.S.P.Q. 351, 353 (Bd. Pat. App. & Inter. 1984); MPEP §2144.04(VI)(C).

"A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); MPEP §2141.02. Further, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d at 902, 221 U.S.P.Q. at 1127; MPEP §2143.01.

With respect to the present application, the Examiner points to nothing in the prior art, and Butz is devoid of any teaching or suggestion to modify tool of Butz to include structure positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub. Rather, Butz teaches away from allowing any relative motion between parts by “securely” connecting the gears 40, 41 to the shafts 36, 42 with set-screws 43, 39 and by securing the flywheel 24 to a splined end of the vertical shaft 36. As noted above, it is improper to combine references where the references teach away from such a combination. Moreover, the only motivation for the claimed subject matter comes from Applicants’ invention, and, therefore, the Examiner’s rejection is a classic case of hindsight.

Further, the modifications suggested by the Examiner are also contrary to the stated objective of “simplifying the assembly and disassembly of the tool,” which is referred to as “the primary object of the invention [of Butz]”. Column 1, lines 2-5. Specifically, the modifications suggested by the Examiner would require the addition of a number of new parts, and these new parts must be particularly small to enable these new parts to be positioned between the outer perimeter of the shaft 36 and the inner edge of the bore extending through either the miter gear 40 or the flywheel 24. Such modifications would significantly complicate assembly and disassembly of the tool of Butz, particularly given the relatively confined space provided by the well 22 of the tool of Butz and the necessity of positioning these small new parts in the confined space provided by the well 22 of the tool of Butz..

The modifications suggested by the Examiner would also require that the bore extending through at least one of the miter gear 40 and the flywheel 24 be substantially enlarged and that “structure” be inserted between the outer perimeter of the shaft 36 and the inner edge of the enlarged bore of the miter gear 40 and the flywheel 24. Given the relative lack of space in the well 22 of the tool of Butz, the outer diameters of the miter gear 40 and the flywheel 24 cannot be increased to accommodate the increased size of their respective bores. Accordingly, assuming that such modifications could be made, the modifications suggested by the Examiner would also significantly weaken the structural integrity of the miter gear 40 and/or the flywheel 24. Moreover, any change in the outer diameters of the miter gear 40 and the flywheel 24 would require the entire gear train (including the miter gears 40, 41, the flywheel 24, and the placement of the dowel 29) of the tool of Butz to be redesigned. Alternatively, if the shaft 36 diameter was

decreased to accommodate such structure, the structural integrity of the shaft 36 would be similarly weakened. For these and other reasons, not only does Butz fail to disclose the modifications suggested by the Examiner but the tool of Butz cannot be modified as suggested by the Examiner without significantly weakening the structural integrity of the tool.

In summary, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest all of the claim limitations of independent Claim 20. Further, there is no teaching or suggestion to combine the references and, in fact, the references teach away from such a combination. Therefore, Applicants respectfully submit that the Examiner has failed to present a *prima facie* case of obviousness of Claim 20 based upon the prior art as required by 35 U.S.C. § 103.

For these and other reasons, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 20. Accordingly, independent Claim 20 is allowable. Claims 21-33 depend from Claim 20 and are allowable for the same and other reasons.

Independent Claim 36 and dependent Claims 37 and 44-52

Claim 36 defines a power tool comprising a housing, a motor supported by the housing and having a drive shaft, an output member supported by the housing and adapted to support a tool element, and a drive mechanism supported by the housing and operable to drive the output member, the drive mechanism including a gear driven by the drive shaft for rotation about an axis and including a protrusion, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a hub protrusion and a drive member offset from the axis, the gear protrusion drivingly engaging the hub protrusion, a drive arm pivotably connected to the drive member and the output member and being operable to convert rotation of the hub to reciprocation of the output member, and structure positioned between the gear protrusion and the hub protrusion, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub.

Butz does not teach or suggest a power tool including, among other things, a gear driven by the drive shaft for rotation about an axis and including a protrusion, and a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a hub protrusion and a drive member offset from the axis, the gear protrusion drivingly

engaging the hub protrusion. Rather, the tool of Butz includes a shaft 36 having a flywheel 24 press fit onto a splined upper end and a miter gear 40 securely fixed to a lower end of the shaft 36 by a set-screw 39. A dowel pin 29 extends upwardly from an upper end of the flywheel 24.

As noted by the Examiner, Butz also does not teach or suggest a power tool including structure positioned between the gear protrusion and the hub protrusion, the structure selectively transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub. Rather, the tool of Butz includes a shaft 42 extending horizontally through a tool body or holder 9 and a miter gear 41 securely fixed to an end of the shaft 42 by a set-screw 43. The tool of Butz also includes a shaft 36 extending vertically through the holder 9 and a miter gear 40 securely fixed to an end of the shaft 36 by a set-screw 39. A flywheel 24 is press fit onto a splined upper end of the shaft 36. Rotational motion is transferred directly from the horizontal shaft 42 and the miter gear 41 to the miter gear 40 and the vertical shaft 36.

For these and other reasons, Butz does not teach or suggest the subject matter defined by Claim 36.

Palm does not cure the deficiencies of Butz. Palm does not teach or suggest a power tool including, among other things, a hub including a hub protrusion and a drive member offset from the axis, the gear protrusion drivingly engaging the hub protrusion. Rather, the tool 9 of Palm includes a radial force device 510 supported in a gear 518 and a jack shaft 24 extending outwardly from a central axis of the radial drive force device 510. A wobble plate member 28 is supported on the jack shaft 24 forwardly and spaced apart from the drive force device 510 by radially inwardly extending portions of the gear 518.

Palm also does not teach or suggest a power tool including a drive arm pivotably connected to the drive member and the output member and being operable to convert rotation of the hub to reciprocation of the output member. Rather, a lower end of the drive arm 34 of Palm supports a bearing 32 and is secured to the wobble plate member 28. A number of elements, including the drive arm 35 of the secondary wobble plate and a bearing 32 secured to the drive arm 35, are positioned between the drive arm 34 and the drive force device 510 of Palm.

For these and other reasons, Palm does not teach or suggest the subject matter defined by Claim 36.

Knight does not cure the deficiencies of Butz and Palm. Knight does not teach or suggest structure positioned between the gear protrusion and the hub protrusion, the structure selectively

transmitting drive force from the gear to the hub and selectively allowing relative movement between the gear and the hub. Rather, the pruning saw 10 of Knight includes a slip clutch including a gear 116 having a smooth upper surface, a cam element 120 having a smooth lower surface, and a spring washer positioned below the gear 116 for providing an adjustable spring force between the smooth lower surface of the cam element 120 and the smooth upper surface of the gear 116.

In addition, Knight does not teach or suggest a power tool including a hub including a drive member offset from the axis and a drive arm pivotably connected to the drive member and the output member and being operable to convert rotation of the hub to reciprocation of the output member. Rather, the pruning saw 10 of Knight includes a pin 125, which extends upwardly from the cam element 120 and is engageable in a cross guide 126. As shown in Figs. 2-3 of Knight, the cross guide 126 is secured to an output element 127 for sliding movement with the output element 127 relative to the saw housing 14.

For these and other reasons, Knight does not teach or suggest the subject matter defined by Claim 36.

King does not cure the deficiencies of Butz, Palm, and Knight. King does not teach or suggest a power tool including, among other things, a housing, a motor supported by the housing and having a drive shaft, an output member supported by the housing and adapted to support a tool element, and a drive mechanism supported by the housing and operable to drive the output member. Rather, King discloses a “[f]lexible [coupling]... for transferring torque from output or drive shafts of devices such as an electric motor or internal combustion engine, to input shafts of various machines or devices, such as fans, packaging machines or pumps.” King, Column 1, lines 17-21.

King also does not teach or suggest a hub including a drive member offset from the axis and a drive arm pivotably connected to the drive member and the output member and being operable to convert rotation of the hub to reciprocation of the output member. Rather, the coupling assembly 10 of King has a linear arrangement and includes circular coupling members 14, 16, a generally circular elastomeric spider 18 and a generally circular housing assembly 12 positioned between the first coupling member 14 and the spider 18 and the second coupling member 16.

For these and other reasons, King does not teach or suggest the subject matter defined by Claim 36.

Iwabuchi does not cure the deficiencies of Butz, Palm, Knight, and King. Iwabuchi does not teach or suggest a power tool including, among other things, a housing, a motor supported by the housing and having a drive shaft, an output member supported by the housing and adapted to support a tool element, and a drive mechanism supported by the housing and operable to drive the output member. Rather, Iwabuchi discloses a transmission buffer for “a motor [used] when a window of an automobile is raised or lowered by the turning force of the motor.” Iwabuchi, Column 1, lines 18-20.

Iwabuchi also does not teach or suggest a power tool including a hub including a drive member offset from the axis and a drive arm pivotably connected to the drive member and the output member and being operable to convert rotation of the hub to reciprocation of the output member. Rather, the power window drive element of Iwabuchi has a linear arrangement and includes a generally circular input rotary body 6, a generally circular output rotary body 11 and a generally circular elastic body 10 positioned between the input rotary body 6 and the output rotary body 11.

For these and other reasons, Iwabuchi does not teach or suggest the subject matter defined by Claim 36.

Further, there is no teaching or suggestion in Butz, Palm, Knight, and King and/or Iwabuchi that these references should or could be combined. In fact these references actually teach away from the combination suggested by the Examiner.

Rather than re-present the arguments set forth above with respect to this contention, for brevity's sake, Applicants refer to the discussion above for Claim 20. With respect to Claim 36, the same arguments apply to the lack of a suggestion in the references that the teachings of the references should or could be combined and to the contention that the references actually teach away from the combination suggested by the Examiner.

In summary, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest all of the claim limitations of independent Claim 36. Further, there is no teaching or suggestion to combine the references and, in fact, the references teach away from such a combination. Therefore, Applicants respectfully submit that the Examiner has failed to

present a *prima facie* case of obviousness of Claim 36 based upon the prior art as required by 35 U.S.C. § 103.

For these and other reasons, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 36. Accordingly, independent Claim 36 is allowable. Claims 37 and 44-52 depend from Claim 36 and are allowable for the same and other reasons.

Independent Claim 39 and dependent Claims 40 and 53-60

Claim 39 defines a reciprocating saw comprising a housing, a motor supported by the housing and having a drive shaft, a spindle supported by the housing and adapted to support a saw blade, and a drive mechanism supported by the housing and operable to drive the spindle, the drive mechanism including a gear driven by the drive shaft for rotation about an axis, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member, and structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact on the spindle.

Butz does not teach or suggest a reciprocating saw including, among other things, a gear driven by the drive shaft for rotation about an axis, and a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member. Rather, the tool of Butz includes a shaft 36 having a flywheel 24 press fit onto a splined upper end and a miter gear 40 securely fixed to a lower end of the shaft 36 by a set-screw 39. A dowel pin 29 extends upwardly from an upper end of the flywheel 24.

As noted by the Examiner, Butz also does not teach or suggest a reciprocating saw including structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact of the spindle. Rather, the tool of Butz includes a shaft 42 extending horizontally through a tool body or holder 9 and a miter gear 41 securely fixed to an end of the shaft 42 by a set-screw 43. The tool of Butz also includes a shaft

36 extending vertically through the holder 9 and a miter gear 40 securely fixed to an end of the shaft 36 by a set-screw 39. A flywheel 24 is press fit onto a splined upper end of the shaft 36. Rotational motion is transferred directly from the horizontal shaft 42 and the miter gear 41 to the miter gear 40 and the vertical shaft 36.

For these and other reasons, Butz does not teach or suggest the subject matter defined by Claim 39.

Palm does not cure the deficiencies of Butz. Palm does not teach or suggest a reciprocating saw including, among other things, a gear driven by the drive shaft for rotation about an axis, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member. Rather, the tool 9 of Palm includes a radial force device 510 supported in a gear 518 and a jack shaft 24 extending outwardly from a central axis of the radial drive force device 510. A wobble plate member 28 is supported on the jack shaft 24 forwardly and spaced apart from the drive force device 510 by radially inwardly extending portions of the gear 518.

Palm also does not teach or suggest a reciprocating saw including a drive arm having a first end and a second end and being operable to convert rotation of the hub to reciprocation of the output member, the first end being connected to the drive member for pivoting movement relative to the hub and the second end being pivotably connected to the output member. Rather, a lower end of the drive arm 34 of Palm supports a bearing 32 and is secured to the wobble plate member 28. A number of elements, including the drive arm 35 of the secondary wobble plate and a bearing 32 secured to the drive arm 35, are positioned between the drive arm 34 and the drive force device 510 of Palm.

For these and other reasons, Palm does not teach or suggest the subject matter defined by Claim 39.

Knight does not cure the deficiencies of Butz and Palm. Knight does not teach or suggest a reciprocating saw including, among other things, structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact on the spindle. Rather, the pruning saw 10 of Knight includes a slip clutch including a gear 116 having a smooth upper surface, a cam element 120 having a smooth lower surface, and a spring washer

positioned below the gear 116 for providing an adjustable spring force between the smooth lower surface of the cam element 120 and the smooth upper surface of the gear 116.

In addition, Knight does not teach or suggest a reciprocating saw including a hub including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member, and a drive arm having a first end and a second end and being operable to convert rotation of the hub to reciprocating of the output member, the first end being connected to the drive member for pivoting movement relative to the hub and the second end being pivotably connected to the output member. Rather, the pruning saw 10 of Knight includes a pin 125, which extends upwardly from the cam element 120 and is engageable in a cross guide 126. As shown in Figs. 2-3 of Knight, the cross guide 126 is secured to an output element 127 for sliding movement with the output element 127 relative to the saw housing 14.

For these and other reasons, Knight does not teach or suggest the subject matter defined by Claim 39.

King does not cure the deficiencies of Butz, Palm, and Knight. King does not teach or suggest a reciprocating saw including, among other things, a motor supported by the housing and having a drive shaft and a spindle supported by the housing and adapted to support a saw blade. Rather, King discloses a “[f]lexible [coupling]... for transferring torque from output or drive shafts of devices such as an electric motor or internal combustion engine, to input shafts of various machines or devices, such as fans, packaging machines or pumps.” King, Column 1, lines 17-21.

King also does not teach or suggest a reciprocating saw including a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member, and a drive arm having a first end and a second end and being operable to convert rotation of the hub to reciprocation of the output member, the first end being connected to the drive member for pivoting movement relative to the hub and the second end being pivotably connected to the output member. Rather, the coupling assembly 10 of King has a linear arrangement and includes circular coupling members 14, 16, a generally circular elastomeric spider 18 and a generally circular housing assembly 12 positioned between the first coupling member 14 and the spider 18 and the second coupling member 16.

For these and other reasons, King does not teach or suggest the subject matter defined by Claim 39.

Iwabuchi does not cure the deficiencies of Butz, Palm, Knight, and King. Iwabuchi does not teach or suggest a reciprocating saw including, among other things, a housing, a motor supported by the housing and having a drive shaft, and a spindle supported by the housing and adapted to support a saw blade. Rather, Iwabuchi discloses a transmission buffer for “a motor [used] when a window of an automobile is raised or lowered by the turning force of the motor.” Iwabuchi, Column 1, lines 18-20.

Iwabuchi also does not teach or suggest a reciprocating saw including a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis and connected to the output member to drivingly connect the hub to the output member. In addition, Iwabuchi also does not teach or suggest a reciprocating saw including a drive arm having a first end and a second end and being operable to convert rotation of the hub to reciprocation of the output member, the first end being connected to the drive member for pivoting movement relative to the hub and the second end being pivotably connected to the output member. Rather, the power window drive element of Iwabuchi has a linear arrangement and includes a generally circular input rotary body 6, a generally circular output rotary body 11 and a generally circular elastic body 10 positioned between the input rotary body 6 and the output rotary body 11.

For these and other reasons, Iwabuchi does not teach or suggest the subject matter defined by Claim 39.

Further, there is no teaching or suggestion in Butz, Palm, Knight, and King and/or Iwabuchi that these references should or could be combined. In fact these references actually teach away from the combination suggested by the Examiner.

Rather than re-present the arguments set forth above with respect to this contention, for brevity's sake, Applicants refer to the discussion above for Claim 20. With respect to Claim 39, the same arguments apply to the lack of a suggestion in the references that the teachings of the references should or could be combined and to the contention that the references actually teach away from the combination suggested by the Examiner.

In summary, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest all of the claim limitations of independent Claim 39. Further, there is no

teaching or suggestion to combine the references and, in fact, the references teach away from such a combination. Therefore, Applicants respectfully submit that the Examiner has failed to present a *prima facie* case of obviousness of Claim 39 based upon the prior art as required by 35 U.S.C. § 103.

For these and other reasons, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 39. Accordingly, independent Claim 39 is allowable. Claims 40, 53-58, and 60 depend from Claim 39 and are allowable for the same and other reasons.

Independent Claim 41 and dependent Claims 40 and 61-67

Claim 41 defines a reciprocating saw comprising a housing, a motor supported by the housing and having a drive shaft, a spindle supported by the housing and adapted to support a saw blade, and a drive mechanism supported by the housing and operable to drive the spindle, the drive mechanism including a gear driven by the drive shaft for rotation about an axis, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear, and structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact on the spindle. Claim 41 specifies that the gear defines a pocket and includes a gear protrusion in the pocket, that a portion of the hub is supported in the pocket and includes a hub protrusion, the gear protrusion drivingly engaging the hub protrusion, and that at least a portion of the structure is positioned between the gear protrusion and the hub protrusion.

Butz does not teach or suggest a reciprocating saw including, among other things, a gear driven by the drive shaft for rotation about an axis, and a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis. Butz also does not teach or suggest a gear that defines a pocket and includes a gear protrusion in the pocket, that a portion of the hub is supported in the pocket and includes a hub protrusion, the gear protrusion drivingly engaging the hub protrusion, and that at least a portion of the structure is positioned between the gear protrusion and the hub protrusion. Rather, the tool of Butz includes a shaft 36 having a flywheel 24 press fit onto a splined upper

end and a miter gear 40 securely fixed to a lower end of the shaft 36 by a set-screw 39. A dowel pin 29 extends upwardly from an upper end of the flywheel 24.

As noted by the Examiner, Butz also does not teach or suggest a reciprocating saw including structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact of the spindle. Rather, the tool of Butz includes a shaft 42 extending horizontally through a tool body or holder 9 and a miter gear 41 securely fixed to an end of the shaft 42 by a set-screw 43. The tool of Butz also includes a shaft 36 extending vertically through the holder 9 and a miter gear 40 securely fixed to an end of the shaft 36 by a set-screw 39. A flywheel 24 is press fit onto a splined upper end of the shaft 36. Rotational motion is transferred directly from the horizontal shaft 42 and the miter gear 41 to the miter gear 40 and the vertical shaft 36.

For these and other reasons, Butz does not teach or suggest the subject matter defined by Claim 41.

Palm does not cure the deficiencies of Butz. Palm does not teach or suggest a reciprocating saw including, among other things, a gear driven by the drive shaft for rotation about an axis, a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis. Palm also does not teach or suggest a gear that defines a pocket and includes a gear protrusion in the pocket, that a portion of the hub is supported in the pocket and includes a hub protrusion, the gear protrusion drivingly engaging the hub protrusion, and that at least a portion of the structure is positioned between the gear protrusion and the hub protrusion. Rather, the tool 9 of Palm includes a radial force device 510 supported in a gear 518 and a jack shaft 24 extending outwardly from a central axis of the radial drive force device 510. A wobble plate member 28 is supported on the jack shaft 24 forwardly and spaced apart from the drive force device 510 by radially inwardly extending portions of the gear 518.

Palm also does not teach or suggest a reciprocating saw including a drive arm pivotably connected to the drive member and the spindle to convert rotation of the hub to reciprocation of the spindle. Rather, a lower end of the drive arm 34 of Palm supports a bearing 32 and is secured to the wobble plate member 28. A number of elements, including the drive arm 35 of the

secondary wobble plate and a bearing 32 secured to the drive arm 35, are positioned between the drive arm 34 and the drive force device 510 of Palm.

For these and other reasons, Palm does not teach or suggest the subject matter defined by Claim 41.

Knight does not cure the deficiencies of Butz and Palm. Knight does not teach or suggest a reciprocating saw including structure to absorb impact positioned between the gear and the hub, the structure selectively transmitting drive force from the gear to the hub and allowing relative movement between the gear and the hub to absorb an impact on the spindle. Rather, the pruning saw 10 of Knight includes a slip clutch including a gear 116 having a smooth upper surface, a cam element 120 having a smooth lower surface, and a spring washer positioned below the gear 116 for providing an adjustable spring force between the smooth lower surface of the cam element 120 and the smooth upper surface of the gear 116.

In addition, Knight does not teach or suggest a reciprocating saw including a hub including a drive member offset from the axis, and a drive arm pivotably connected to the drive member and the spindle to convert rotation of the hub to reciprocation of the spindle. Rather, the pruning saw 10 of Knight includes a pin 125, which extends upwardly from the cam element 120 and is engageable in a cross guide 126. As shown in Figs. 2-3 of Knight, the cross guide 126 is secured to an output element 127 for sliding movement with the output element 127 relative to the saw housing 14.

For these and other reasons, Knight does not teach or suggest the subject matter defined by Claim 41.

King does not cure the deficiencies of Butz, Palm, and Knight. King does not teach or suggest a reciprocating saw including, among other things, a housing, a motor supported by the housing and having a drive shaft, a spindle supported by the housing and adapted to support a saw blade, and a drive mechanism supported by the housing and operable to drive the spindle. Rather, King discloses a “[f]lexible [coupling]... for transferring torque from output or drive shafts of devices such as an electric motor or internal combustion engine, to input shafts of various machines or devices, such as fans, packaging machines or pumps.” King, Column 1, lines 17-21.

King also does not teach or suggest a reciprocating saw including a hub including a drive member offset from the axis, and a drive arm pivotably connected to the drive member and the

spindle to convert rotation of the hub to reciprocation of the spindle. Rather, the coupling assembly 10 of King has a linear arrangement and includes circular coupling members 14, 16, a generally circular elastomeric spider 18 and a generally circular housing assembly 12 positioned between the first coupling member 14 and the spider 18 and the second coupling member 16.

For these and other reasons, King does not teach or suggest the subject matter defined by Claim 41.

Iwabuchi does not cure the deficiencies of Butz, Palm, Knight, and King. Iwabuchi does not teach or suggest a reciprocating saw including, among other things, a housing, a motor supported by the housing and having a drive shaft, a spindle supported by the housing and adapted to support a saw blade, and a drive mechanism supported by the housing and operable to drive the spindle. Rather, Iwabuchi discloses a transmission buffer for “a motor [used] when a window of an automobile is raised or lowered by the turning force of the motor.” Iwabuchi, Column 1, lines 18-20.

Iwabuchi also does not teach or suggest a reciprocating saw including a hub selectively driven by the gear for rotation about the axis, the hub being movable relative to the gear and including a drive member offset from the axis. In addition, Iwabuchi also does not teach or suggest a reciprocating saw including a drive arm pivotably connected to the drive member and the spindle to convert rotation of the hub to reciprocation of the spindle. Rather, the power window drive element of Iwabuchi has a linear arrangement and includes a generally circular input rotary body 6, a generally circular output rotary body 11 and a generally circular elastic body 10 positioned between the input rotary body 6 and the output rotary body 11.

For these and other reasons, Iwabuchi does not teach or suggest the subject matter defined by Claim 41.

Further, there is no teaching or suggestion in Butz, Palm, Knight, and King and/or Iwabuchi that these references should or could be combined. In fact these references actually teach away from the combination suggested by the Examiner.

Rather than re-present the arguments set forth above with respect to this contention, for brevity's sake, Applicants refer to the discussion above for Claim 20. With respect to Claim 41, the same arguments apply to the lack of a suggestion in the references that the teachings of the references should or could be combined and to the contention that the references actually teach away from the combination suggested by the Examiner.

In summary, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest all of the claim limitations of independent Claim 41. Further, there is no teaching or suggestion to combine the references and, in fact, the references teach away from such a combination. Therefore, Applicants respectfully submit that the Examiner has failed to present a *prima facie* case of obviousness of Claim 41 based upon the prior art as required by 35 U.S.C. § 103.

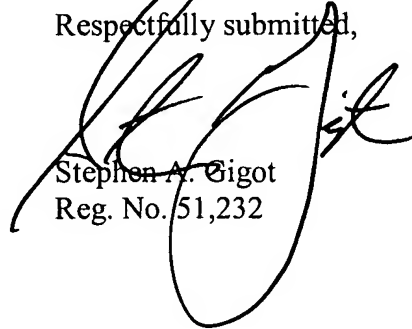
For these and other reasons, Butz, Palm, Knight, King, and Iwabuchi, alone or in combination, do not teach or suggest the subject matter defined by independent Claim 41. Accordingly, independent Claim 41 is allowable. Claims 61-67 depend from Claim 41 and are allowable for the same and other reasons.

CONCLUSION

In view of the foregoing, Applicants respectfully request entry of the above amendments and allowance of Claims 20-33, 36-37, 39-41, 44-58 and 59-67.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,



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